## CLAIMS

I Claim:

1. A one piece pressure protection valve and manifold, comprising:

a) a housing defining an inlet passage and at least three outlet passages;

b) a valve in said housing interposed between said inlet passage and said outlet passages, said valve being constructed to prevent fluid flow from said inlet passage to said outlet passages when a fluid pressure at said inlet passage is below a predetermined value.

2. The one piece pressure protection valve and manifold of claim 1 wherein said valve comprises a piston biased toward said inlet by a spring to prevent said fluid flow from said inlet passage to said outlet passages when said fluid pressure at said inlet passage is less than a biasing force of said spring.

3. The one piece pressure protection valve and manifold of claim 2 further comprising a vent defined by said housing in communication with said piston.

4. The one piece pressure protection valve and manifold of claim 1 wherein said valve closes on decreasing pressure between about 62 and 72 PSIG.

5. The one piece pressure protection valve and manifold of claim 1 wherein said valve opens on rising inlet pressure between 75 and 95 PSIG.

6. The one piece pressure protection valve and manifold of claim 1 wherein inlet and said outlets each include push to connect cartridge fittings.

7. The one piece pressure protection valve and manifold of claim 1 wherein said inlet includes a ½ inch push to connect cartridge fitting and said outlet passages comprise seven outlet passages wherein three of said outlet passages include 1/4 inch

push to connect cartridge fittings and four of said outlet passages include 3/8 inch push to connect cartridge fittings.

8. A one piece pressure protection valve and manifold, comprising:

a) a housing defining an inlet passage, a plurality of outlet passages and a vent;

b) a valve in said housing interposed between said inlet passage and said outlet passages, said valve comprises a piston biased toward said inlet by a spring, said vent prevents a build up of pressure between said piston and an interior of said housing, said valve closes on decreasing pressure between about 62 and 72 PSIG and opens on rising inlet pressure between 75 and 95 PSIG;

c) a push to connect cartridge fitting of a first size on said inlet; and

d) push to connect cartridge fittings of a different size or different sizes on said outlets.

9. The one piece pressure protection valve and manifold of claim 8 wherein said inlet push to connect cartridge fitting is a ½ inch fitting and said plurality of outlet passages comprise seven outlet passages wherein three of said outlet passages include 1/4 inch push to connect cartridge fittings and four of said outlet passages include 3/8 inch push to connect cartridge fittings.

10. A system for preventing air pressure loss to vehicle air brakes, comprising:

a) an air tank for supplying air under pressure;

b) an inlet air tube having a first end connected to said air tank and a second end;

c) a one piece pressure protection valve and manifold that includes:

i) a housing defining an inlet passage connected to said second end of said inlet air tube and at least three outlet passages;

ii) a valve in said housing interposed between said inlet passage and said outlet passages, said valve being constructed to prevent fluid flow from said inlet passage to said outlet passages when a fluid pressure at said inlet passage is below a

predetermined value; and

d)outlet air tubes each having a first end connected to one of said outlet passages and a second end connected to an air powered vehicle accessory.

11. The system of claim 10 wherein one of said air powered accessories is an air horn.

12. The system of claim 10 wherein one of said air powered accessories is an air seat.

13. The system of claim 10 wherein one of said air powered accessories is fan clutch.

14. The system of claim 10 wherein one of said air powered accessories is a cab suspension.

15. The system of claim 10 wherein one of said air powered accessories is a transmission.

16. The system of claim 10 wherein one of said air powered accessories is a clutch assist.

17. The system of claim 10 wherein one of said air powered accessories is a rear suspension.

18. The system of claim 10 wherein one of said air powered accessories is an air spring.

19. The system of claim 10 wherein said valve comprises a piston biased

toward said inlet by a spring to prevent said fluid flow from said inlet passage to said outlet passages when said fluid pressure at said inlet passage is less than a biasing force of said spring.

20. The system of claim 10 wherein said valve closes on decreasing pressure between about 62 and 72 PSIG.

21. The system of claim 10 wherein said valve opens on rising inlet pressure between 75 and 95 PSIG.

22. The system of claim 10 wherein inlet and said outlets each include push to connect cartridge fittings.

23. The system of claim 10 wherein said inlet includes a ½ inch push to connect cartridge fitting and said outlet passages comprise seven outlet passages wherein three of said outlet passages include 1/4 inch push to connect cartridge fittings and four of said outlet passages are 3/8 inch push to connect cartridge fittings.

24. A system for preventing air pressure loss to vehicle air brakes, comprising:

a) an air tank for supplying air under pressure;

b) an inlet air tube having a first end connected to said air tank and a second end;

c) a one piece pressure protection valve and manifold, that includes:

i) a housing defining an inlet passage connected to said second end of said inlet tube, a plurality of outlet passages and a vent;

ii) a valve in said housing interposed between said inlet passage and said outlet passages, said valve comprises a piston biased toward said inlet by a spring, said vent prevents a build up of pressure between said piston and an interior of said housing, said valve closes on decreasing pressure between about 62 and 72 PSIG and opens on rising inlet pressure between 75 and 95 PSIG;

iii) a push to connect cartridge fitting of a first size on said inlet;

iv) push to connect cartridge fittings of a different size or different sizes than said first size on said outlets; and

d)outlet air tubes each having a first end connected to one of said outlet passages and a second end connected to an air powered vehicle accessory.

25. The system of claim 24 wherein said housing includes a ½ inch push to connect cartridge inlet, four 3/8" push to connect cartridge outlets, and three 1/4" push to connect cartridge outlets.

26. The system of claim 25 wherein one 3/8 inch outlet is connected to a rear suspension, one 3/8 inch outlet is connected to a clutch assist, one 3/8 inch outlet is connected to a transmission, one 3/8" outlet is connected to an air horn, one 1/4 inch outlet is connected to an air seat, one 1/4 inch outlet is connected to a fan clutch, and one 1/4 inch outlet is connected to a cab suspension.

27. A method of preventing air pressure loss to vehicle air brakes, comprising:

a) connecting an inlet of a one piece pressure protection valve and manifold to a source of fluid pressure;

b) connecting outlets of said one piece pressure protection valve and manifold to a plurality of air driven accessories;

c) opening a passage between said inlet and said outlets when a fluid pressure applied to a valve of said one piece pressure protection valve is greater than a first predetermined value; and

d) closing a passage between said inlet and said outlets when said fluid pressure is less than a second predetermined value to prevent air pressure loss to air brakes.

28. The method of claim 27 wherein a piston of said valve biased toward said inlet by a spring to close said passage.

29. The method of claim 27 wherein said passage is closed on decreasing pressure between about 62 and 72 PSIG.

30. The method of claim 27 wherein said passage is opened on rising inlet pressure between 75 and 95 PSIG.

31. The system of claim 27 wherein one of said air driven accessories is an air spring and said passage is closed when said air spring leaks.

32. The system of claim 27 wherein one of said air driven accessories is a cab suspension and said passage is closed when said cab suspension leaks.

33. The system of claim 27 wherein one of said air driven accessories is a rear suspension and said passage is closed when said cab suspension leaks.